

# Recovery Plans: development & implementation

Native to nearly every major river north of the Housatonic, as many as 500,000 adult Atlantic salmon once returned to U.S. rivers each year to spawn. Today, less than 2,000 adults return annually and only to rivers located in northernmost corner of the U.S. In 2000, the U.S. Fish and Wildlife Service and NOAA-Fisheries jointly listed the Gulf of Maine distinct population segment (GOM DPS) of Atlantic salmon as endangered under the Endangered Species Act.

As endangered species are in jeopardy of becoming extinct, their protection and recovery is a priority. Recovery plans outline what actions are needed to protect and recover the species to the point where it can persist into the foreseeable future and remain viable.

Defining “recovery” and identifying what criteria must be met for recovery to occur is perhaps the most fascinating and challenging aspect of recovery planning. For example, what exactly is “recovery”? Is it simply based on the total number of returning adult salmon? What if enough salmon return to one river that the recovery criteria are met, but no salmon return to any of the other rivers they once occupied? Has recovery occurred? Once a species has been recovered, how do we make sure it “persists”? Populations fluctuate naturally over time—how much fluctuation can occur before a population is no longer adequately persisting? Finally, what is the “foreseeable future”? In terms of species persistence, 10-20 years is generally regarded as foreseeable (after that, we cannot make predictions confidently). Thus, to be considered recovered, a species must not be at risk of becoming threatened or endangered within this time frame. In addition, populations should be viable. Viable Salmonid Population criteria essentially say that a viable population has a negligible risk of extinction within a 100 year time period.

## ENDANGERED SPECIES ACT OF 1973

AN ACT To provide for the conservation of endangered and threatened species of fish, wildlife, and plants...

Section 4(f)(1) RECOVERY PLANS—The Secretary shall develop and implement plans for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species. The Secretary, in development and implementing recovery plans, shall, to the maximum extent practicable...

(B) incorporate in each plan—

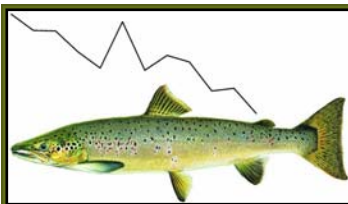
(i) a description of such site-specific management actions as may be necessary to achieve the plan's goal for the conservation and survival of the species;

(ii) objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of this section, that the species be removed from the list; and

(iii) estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.

*Excerpt from the Endangered Species Act*

These are some of difficult questions that individuals involved with developing the recovery plan for Atlantic salmon grappled with on a daily basis—from the time of listing in 2000 to the release of the final plan in 2005. And these questions continue to affect decisions as we enter the implementation phase of recovery and begin to carry out the actions identified as necessary to halt and reverse the decline of the GOM DPS and enable it to persist into the foreseeable future.



**Quick Fact:** for the purposes of the ESA, the terms *conserve*, *conserving*, and *conservation* mean “to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act [the ESA] are no longer necessary.”

(Artwork by Tomelleri)

# Recovery Planning and Implementation: Q & A

## *What must all recovery plans incorporate?*

1. A description of site-specific management actions necessary to accomplish the plan's goals for the conservation and survival of the species.
2. Objective, measurable reclassification and delisting criteria which are used to gauge a species' recovery and, when met, result in a determination that the species be removed from the Federal List of Endangered and Threatened Wildlife and Plants.
3. Estimates of the time/cost to carry out the plan's goal and to achieve intermediate steps towards that goal.

## *What is the goal of the recovery program for the GOM DPS?*

The goal is to remove the GOM DPS from the Federal List of Endangered and Threatened Wildlife and Plants. Recovery will be achieved when conditions have been attained that allow self sustaining populations to persist under minimal ongoing management and investment of resources. In order to achieve the goal of recovery the Plan lays out a stepwise approach for addressing critically low numbers of returning adults and leading toward full recovery.

## *Who was involved with preparing the recovery plan for the GOM DPS?*

With the assistance of the U.S. Fish and Wildlife Service and the Maine Atlantic Salmon Commission, staff of NOAA-Fisheries Northeast Regional Offices prepared a draft recovery plan which was then shared with the public. Comments were solicited before the plan was finalized, ensuring that the public had the opportunity to provide input in the recovery planning process.

## *Is the recovery plan working?*

The final recovery plan for the GOM DPS was completed in November of 2005 and a number of the factors identified as contributing to the current status of Atlantic salmon in the U.S. are being addressed. For instance, the Maine salmon farming industry has adopted and implemented many of the protective measures recommended by federal resource agencies to minimize potential threats to the GOM DPS.

## *What is the structure of the recovery team?*

The structure of recovery teams vary from species to species. The structure of the Atlantic salmon Recovery Team consists of a Core Recovery Team (CRT), a Recovery Team Coordinating Committee (RTCC), and adjunct Recovery Team Work Groups (RTWG). Members of the team have technical expertise in areas identified as important to recovery. These include: predator management, water quality, forestry, aquaculture, fish disease/pathology, hydrology, education and outreach, regional (Mid-coast and Downeast) issues, tribal culture/resources, habitat conservation, landuse regulation/management and fisheries biology.

## *What is the charge of the recovery team?*

The charge of the recovery team is operationalizing the recovery plan, and specifically, prioritizing actions and providing recommendations as to how to sequence key actions and realistically initiate actions on the ground.

## *What actions are needed to halt and reverse the decline of the GOM DPS?*

To halt and reverse the decline of the GOM DOS, the following actions are needed: protecting and restoring freshwater and estuarine habitat; minimizing potential for take; reducing risks from commercial aquaculture operations; supplementing wild populations with hatchery-reared offspring; conserving genetic diversity; assessing stock status at key life stages; promoting recovery through increased public and government awareness; assessing effectiveness of recovery actions and revising them as appropriate.

The NOAA's National Marine Fisheries Service (NMFS) Northeast Salmon Team (NEST) is comprised of managers from the Northeast Regional Office (NER) and scientists from the Northeast Fisheries Science Center (NEC). The NER administers NOAA's programs in the Northeastern United States to manage living marine resources for optimum use. The NEC is the research arm of NOAA Fisheries in the region and plans, develops, and manages a multidisciplinary program of basic and applied research. <http://www.nefsc.noaa.gov/salmon/>

